

REMARKS

The Examiner is thanked for the due consideration given the application. The specification has been amended to improve the language.

Claims 1 and 3-28 are pending in the application. Claims 26-28 are newly presented. The claim set has been amended to better set forth the sidewall, which amendments find support in, e.g., Figure 2E of the application.

Rejections Based on GALLAGHER et al.

Claims 1, 3, 5, 6, and 11-16 have been rejected under 35 USC §102(b) as being anticipated by GALLAGHER et al. Claim 7 has been rejected under 35 USC §103(a) as being unpatentable over GALLAGHER et al. in view of BHATTACHARYYA. Claims 17 and 18 have been rejected under 35 USC §103(a) as being unpatentable over GALLAGHER et al. in view of YOSHIDA et al. These rejections are respectfully traversed.

The present invention pertains to a magnetic memory having a sidewall structure that is illustrated, by way of example, in Figure 2E of the application, which is reproduced below.

Fig. 2E

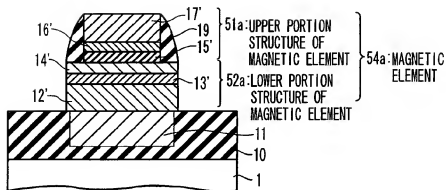


Figure 2E shows a magnetic element with an upper portion and a lower portion. An insulating sidewall is formed over the lower portion. Claim 1 of the present invention recites: *"an insulating sidewall provided to surround said upper portion structure of said magnetic element; wherein the lower portion structure has an outer circumference that is the same as an outer circumference of a bottom of the sidewall."* Analogous recitations can be found in independent claims 4 and 12.

Newly presented claims 26-28 set forth the curved nature of the surface of the sidewall.

GALLAGHER et al. pertain to magnetic tunnel junctions. The Official Action refers to Figure 8D of GALLAGHER et al., which is reproduced below.

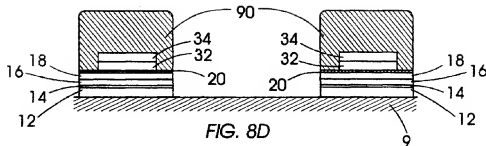
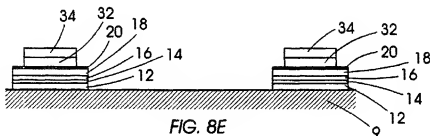


Figure 8D of GALLAGHER et al. shows a structural cross section covered by a resist pattern 90, which the Office Action asserts is a sidewall insulating film. However, this resist pattern 90 is not a *sidewall* or any other permanent structure. Instead, the resist pattern is completely removed as can be seen in Figure 8E of GALLAGHER et al., reproduced below (see also column 10, lines 23-33).



As has been noted, this structure in Figure 8D of GALLAGHER et al. is not a magnetic memory, but rather a step in the manufacturing process. The Office Action asserts that the term "magnetic memory" is in the preamble and is thus not entitled to patentable weight.

However, the claim preamble must be viewed in light of the entire claim.

"If the claim preamble, when read in the context of the entire claim, recites limitations of the claim, or, if the claim preamble is 'necessary to give life, meaning, and vitality' to the claim, then the claim preamble should be construed as if in the balance of the claim." *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1305, 51 USPQ2d 1161, 1165-66 (Fed. Cir. 1999). See also *Jansen v. Rexall Sundown, Inc.*, 342 F.3d 1329, 1333, 68 USPQ2d 1154, 1158 (Fed. Cir. 2003). *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951) (A preamble reciting "An abrasive article" was deemed essential to point out the invention defined by claims to an article comprising abrasive grains and a hardened binder and the process of making it. The court stated "it is only by that phrase that it can be known that the subject matter defined by the claims is comprised as an abrasive article. Every union of substances capable *inter alia* of use as abrasive grains and a binder is not an 'abrasive article.'" Therefore, the preamble served to further define the structure of the article produced.).

In this case, the term "magnetic memory" in the preamble sets forth a limitation that clearly defines over GALLAGHER et al. The preamble of the claim thus has patentable weight.

Additionally, the Office Action asserts that Figure 8D of GALLAGHER et al. shows the lower portion structure has an outer circumference that is the same as an outer circumference of

a bottom of the sidewall insulating film. The applicants could find no teaching of this type in the specification of GALLAGHER et al., and it appears that this inference has been made by a visual inspection of Figure 8D of GALLAGHER et al.

However, there is no indication in GALLAGHER et al. that Figure 8D of GALLAGHER et al. is to scale, and measuring this drawing figure to infer that the circumferences are equal is impermissible.

When the reference does not disclose that the drawings are to scale and is silent as to dimensions, arguments based on measurement of the drawing features are of little value. See *Hockerson-Halberstadt, Inc. v. Avia Group Int'l*, 222 F.3d 951, 956, 55 USPQ2d 1487, 1491 (Fed. Cir. 2000).

The Office Action additionally asserts that the unfinished device indicating a process step in Figure 8D of GALLAGHER et al. can function as a memory device. However, proving whether it can or cannot is problematic in the light that no evidence has been proffered to support this assertion.

BHATTACHARYYA and YOSHIDA et al. fail to address the above-described deficiencies of GALLAGHER et al., and no further discussion of these references is required.

GALLAGHER et al. thus fail to anticipate a claimed embodiment of the present invention. One of ordinary skill and creativity would fail to produce a claimed embodiment of the present invention from a knowledge of GALLAGHER et al. together

with BHATTACHARYYA or YOSHIDA et al. A *prima facie* case of unpatentability has thus not been made.

These rejections are believed to be overcome, and withdrawal thereof is respectfully requested.

Rejections Based on OKAZAWA et al.

Claims 1, 3-5, 8-14, 16, 19 and 21-25 have been rejected under 35 USC §102(e) as being anticipated by OKAZAWA et al. Claim 20 has been rejected under 35 USC §103(a) as being unpatentable over OKAZAWA et al. in view of TUTTLE. These rejections are respectfully traversed.

OKAZAWA et al. pertain to a method of forming a magnetic memory. The Official Action refers to Figure 2J of OKAZAWA et al., which is reproduced below.

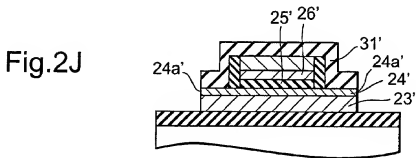
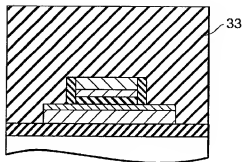


Figure 2J shows a structure including insulating layer 25' and magnetization layer 26', over which is an oxide film pattern 31'. However, this oxide film pattern 31' is used as a mask and then integrated with silicon film 33, as is shown in Figure 2K (see paragraph 0059), which is reproduced below.

Fig.2K



OKAZAWA et al. thus do not disclose a completed device where the lower portion structure has an outer circumference that is the same as an outer circumference of a bottom of the sidewall, such as is set forth in the independent claims of the present invention.

That is, similar to the rejections based on GALLAGHER et al., an intermediate step is being conflated with a completed device.

TUTTLE fails to address the above-described deficiencies of OKAZAWA et al., and additional discussion of this reference is not needed.

OKAZAWA et al. thus fail to anticipate claimed embodiment of the present invention.

One of ordinary skill and creativity would fail to produce a claimed embodiment of the present invention from a knowledge of OKAZAWA et al. and TUTTLE, and a *prima facie* case of unpatentability has thus not been made.

These rejections are believed to be overcome, and withdrawal thereof is respectfully requested.

Conclusion

In light of the amendments provided above and arguments offered in support thereof, applicants believe the present application is in condition for allowance and an early indication of the same is respectfully requested.

If the Examiner has any questions or requires further clarification of any of the above points, the Examiner may contact the undersigned attorney so that this application may continue to be expeditiously advanced.

Please charge the fee of \$156 for three dependent claims added herewith to our credit card.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

YOUNG & THOMPSON

/Robert E. Goozner/
Robert E. Goozner, Reg. No. 42,593
209 Madison Street, Suite 500
Alexandria, VA 22314
Telephone (703) 521-2297
Telefax (703) 685-0573
(703) 979-4709

REG/lrs